EFFECTIVENESS OF CLASSROOM INTERACTION ON ENGLISH LANGUAGE PRODUCTION IN TAMIL MEDIUM SCHOOLS IN COIMBATORE

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by

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ABSTRACT

The research study emphasized on the importance of classroom interaction (CI) in English language classes for language acquisition among the second language learners of English based on the interaction approach of language learning. The present study was attempted to address the problem of students entering tertiary level of education with dissimilar levels of English language proficiency due to the inequity in English language education among various types of schools in India. The main purpose of the study was to facilitate classroom interaction (CI) for English language learning in the context through the development of an Interactive Hour module and thereby providing opportunities for disadvantaged learners to be exposed to graded target language and enabling them to produce the target language inside classroom spaces with corrective feedback on language use. The research was carried out in two phases using mixed methods research design in government-aided Tamil medium schools in the district of Coimbatore, Tamil Nadu, India.

Phase I of the study, which was majorly qualitative in nature, was conducted to establish the need for the study in the context. It was aimed to systematically present the actual teaching and learning scenario of English language classrooms in government-aided schools in Tamil Nadu in comparison to what is mentioned in the national and state education policy notes and official documents related to English language teaching. The major objectives of phase I of the study were to understand the pedagogic goals of English language teachers and their classroom interactional awareness and to observe and evaluate the nature and extent of classroom interaction in English language classes in the context in the language policy and planning. Semi-structured interviews were conducted to understand the pedagogic goals of the teachers and classrooms were observed to analyse the Teacher Talk (TT) and to evaluate the nature and extent of classroom interaction in English language classes using the Framework for Analysing Classroom Interaction (Walsh, 2006) and Classroom Oral Participation Scheme (COPS)

(King, 2012) respectively. The research tools were tested for validity and reliability in pilot study 1. The researcher-developed Interactive Hour module was content-validated by a panel of eleven subject experts and was piloted in schools A and B in the context in pilot study 2.

In the quantitative phase II of the study, the efficacy of the Interactive Hour module was tested in terms of the nature and extent of classroom interaction (CI) and achievement of learning outcomes of the individual units in the module. The number of classes observed in phase II of the study is 20. COPS tool was used to evaluate the differences in the nature and extent of the classroom interaction (CI) between English language classes and Interactive Hours. The progress tests were conducted before and after transaction of every unit in the module and the participants were scored based on a speaking assessment rubric-scale which was also validated by the experts as part of the module. The effectiveness of classroom interaction (CI-independent variable) that was transacted through Interactive Hour module on English language production (dependent variable) of the participants was evaluated in the experimental study. The sample size of the participants from schools P, Q and R in the main experimental study is 73. The English language production of the participants was measured in terms of CALF (Complexity, Accuracy, Lexis and Fluency) pre and post the intervention. The students' speech output from picture description tasks were recorded for a maximum of two minutes and the speech was transcribed in CHAT format (MacWhinney, 2000). The transcribed speech data was coded in the CLAN software and the text files were uploaded on CALF: An Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency (Bui & Skehan, 2016) to derive the CALF measures of English language production.

The Shapiro-Wilk test of Normality was conducted for results obtained from all the tools in phase II of the study. The samples from schools P, Q and R of unequal sample sizes were tested for equality of means using Welch's t-test. The differences in the number of minutes of classroom interaction (CI) from independent samples

of English language classes and Interactive Hours were compared using Mann-Whitney U test. Spearman's rank correlation coefficient was used to find the relationship between the oral participation among the categories in the first section of COPS tool. Wilcoxon signed rank test of related samples was used to evaluate the efficacy of the individual units in the module by comparing the differences in the progress tests in the module. The effectiveness of the Interactive Hour module on English language production in the paired non-parametric sample was tested using Wilcoxon signed rank test. It was used to compare the differences in the pre-test and post-test CALF measures of English language production of the single-experimental group. The researcher also calculated the effect size of all the measures by dividing the absolute standardized test statistic z obtained from the Wilcoxon signed rank tests by square root of number of pairs.

The data from phase I of the study showed that there is a gap between the language policy at the macro-level and actual practices of English language teaching and learning in the classrooms at the micro-level. The results from the semi-structured interviews showed that the pedagogical goals of English language teachers were not aligned with that of the goals suggested in the English education policy notes and the aimed language learning outcomes. It was identified that teachers do not use bilingual mode but teach the English subject in mother tongue. Through analysis it is understood that the teachers were not satisfied with the present assessment model of English language education and expressed the need for oral assessment components. Analysis of Teacher Talk (TT) showed that the teachers did not exhibit skills and classroom context modes in English language classes and they had low classroom interactional awareness. Results from COPS tool showed that oral participation of any kind in English language in English language classes in Tamil medium schools was recorded only up to an incredibly low 9.5% of the class across three out the observed classroom interaction of nine categories and an incredibly high 83.23% and 7.22% of the entire class time was characterized by oral participation in Tamil and silence respectively. The analysis of data obtained

from the COPS tool and progress tests provided statistically significant evidence for the efficacy of the researcher-developed Interactive Hour module based on interaction approach of language learning in phase II of the study in terms of increased oral participation and achievement of learning outcomes to a very large extent. The results showed that classroom interaction (CI) facilitated through the researcher-developed Interactive Hour module based on interaction approach of language learning had a statistically significant influence on overall English language production of the participants in terms of complexity, accuracy, lexis and fluency. The calculation of the effect sizes showed that the Interactive Hour module had a moderate effect on complexity, large effect on accuracy and lexis and a very large effect on fluency.

Keywords: interaction approach, classroom interaction (CI), English language production, Interactive Hour, Complexity, Accuracy, Lexis, Fluency

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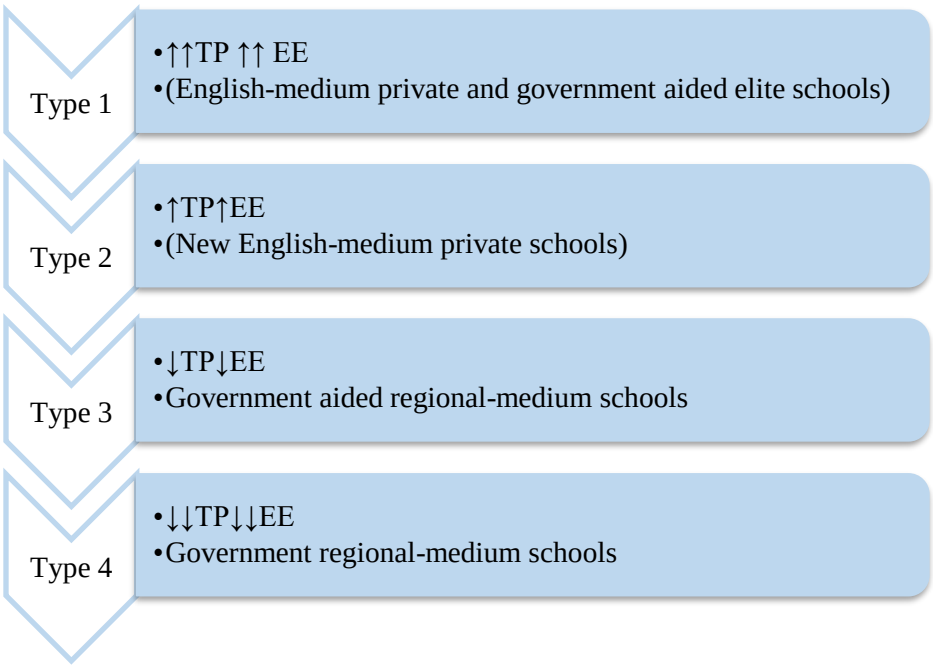
1. Introduction

The requirement of proficiency in English language for upward mobility in India is undeniable. The NCERT's teaching position paper on English language teaching states that "English is in India today a symbol of people's aspirations for quality in education and a fuller participation in national and international life" (NCERT, 2006, p. 1). The English language education system in India generally invests the maximum on the reading and writing skills rather than on listening or speaking skills for which the curriculum design and the assessment methods stand as evidence. "In a society where English proficiency guarantees economic and social upward mobility, much greater investment in research that informs policy and practice is necessary but does not seem to be forthcoming" (Ramanathan, 2016). The Draft National Educational Policy (2019) clearly expresses the desire to promote high accessibility and quality in English language education in India in all government and non-government schools "to help break the current divide between the economic elite and the rest of the country, in addition to teaching Indian languages" with the focus on functionality and fluency (p. 82). There's a huge dissimilarity in terms of English language proficiency between the different types of schools (NCERT, 2006, p.2) which are primarily categorized on the basis of two factors such as teachers' English language proficiency (TP) and English in the environment for language acquisition (EE). Ignoring these two factors, the state government of Tamil Nadu prescribes common English language curriculum for students from the English and Tamil medium schools. There is no compromise done in terms of syllabus planning and textbook designing for the lack of both exposure to the target language and opportunities to use the language among the students from the Tamil medium schools. With the given conditions of limited teachers' proficiency and students' exposure to English language, it needs to be made sure that the extent to which the students are exposed to the target language and the extent to which they are made to produce the target language inside the classroom space is optimum. Literature on second language acquisition informs us that classroom interaction (CI) is one of the most indispensable components for English language learning. Allwright (1984) bluntly emphasizes the importance of interaction in English language classes while stating that "classroom interaction is important because interaction is the sine qua non of classroom pedagogy… if no person- to- person interaction had occurred in a classroom, we would be probably be unwilling to accept that a lesson had taken place at all" (p. 159). This study focused on type III schools (see figure 1) in the district of Coimbatore, Tamil Nadu and the researcher

attempted to bring in optimal 'classroom interaction' (CI) through the proposal of addition of Interactive Hour in the English language curriculum for the Tamil-medium students. The researcher created the Interactive Hour modules based on the interaction approach of language learning and evaluated its effectiveness in the context based on the students' performance in terms of complexity, accuracy, lexis and fluency (CALF).

Figure 1

Typologies of Schools in India



Note. From *Position Paper: National Focus Group on Teaching of English*, (p. 2), National Council of Educational Research and Training (NCERT), 2007.

2. Relevance of the Study

There are different boards of education which cater to the different sectors of the public in India. There are State Government, Central Government, International and Private (follows State Government curriculum) boards in the school level education system. After the completion of school education, students from across all these boards compete for the University education on the basis of their board examination results and entrance examinations (emphasis on the English language skills and the subject knowledge). More importantly, all the universities and colleges

across the country provide only English medium instruction in the undergraduate education. In Tamil Nadu, the state government provides both English and Tamil mediums of instruction in the primary, middle, secondary and higher secondary schools. The State Government of Tamil Nadu introduced the Uniform system of school education in the year 2010. The State Council for Educational Research and Training (SCERT) of Tamil Nadu designs the curriculum, syllabus and the textbooks for all the government and private matriculation schools in the state with the exception of schools under CBSE and International boards.

"Input rich communicational environments are a prerequisite for language learning, whether first or second" (NCERT, 2005, p. 39). Literature on learning English as a second language informs us that the extent to which a learner is exposed to English language is directly proportional to the degree of language acquisition. A common English language syllabus is prescribed for both the English and Tamil medium schools in the state. The students from the Tamil medium schools are exposed to the language only during the English classes and this exposure is again solely dependent on the English language teachers' proficiency and the learning materials. The NCERT (2006, p.2) has categorized all government and government-aided regional medium schools as the lowest in terms of teacher's English language proficiency and English in the environment for language learning. The varied level of exposure to English language between the students from English and Tamil medium schools has been completely ignored by the SCERT in the curriculum design for English language subject.

As a result, the students from the Tamil and English medium schools are found to be varying in their English language proficiency to a very large extent notwithstanding their knowledge on the core subjects. Eventually, when the students from the different boards of education enter the tertiary level, the students from the type III and IV schools (NCERT, 2006, p.2) find it extremely difficult to grapple with the subjects and the environment. They are bombarded with the second language on all fronts and this factor becomes a huge barrier in the personal and professional development.

The crucial problem here is the lack of exposure to the language and the lack of opportunities to use the language inside the classroom spaces. The researcher has addressed this issue in my PhD research project by primarily proposing integration of Interactive Hour in the English language education curriculum for the Tamil medium schools in the state. The researcher has developed Interactive Hour modules for sixth standard in this study which I then intend to propose it to

State Council Educational Research and Training (SCERT) of Tamil Nadu. The module that I have developed in the course of the study for the Interactive Hour could be used as a model for the development of Interactive Hour modules for the rest of the classes in Type III and IV schools. In this way, the students would be equipped with the necessary English language proficiency before they enter the University level education and thus tackle with the existing problem of inequity of English language education in the state.

3. Statement of the research problem and objectives

The extent of interaction in the target language is identified to be a major determiner of an individual's development of language proficiency and hence needs to be well attended to in the early language learning phases. As a result of the inequality in the extent of language exposure and language usage opportunities, students from different boards of study from varied learning situations enter the university level education with dissimilar levels of English language proficiency. The learners of English as a second language from type IV schools (NCERT, 2006, p. 2) in Tamil Nadu find it extremely difficult to grapple with the abrupt increase in the language proficiency level when they enter the tertiary level of education which eventually becomes a major encumbrance in their academic, professional and personal development.

4. Research Objectives

- ✓ To understand the pedagogical goals of English language teachers in Tamil-medium schools and their classroom interactional awareness
- ✓ To observe and evaluate the classroom interaction (CI) in English language classes in Tamil medium schools in Coimbatore
- ✓ To develop an Interactive Hour module to facilitate classroom interaction (CI)
- ✓ To evaluate the efficacy of the Interactive Hour module in terms of classroom interaction (CI) and learning outcomes
- ✓ To evaluate the effectiveness of classroom interaction (CI) on the development of the English language production in the Tamil medium school students

5. Research Questions

- RQ1. What are the pedagogical goals of English language teachers in Tamil medium schools and what is their understanding of classroom interaction (CI)?
- RQ2. What is the nature and extent of classroom interaction (CI) that happens in English language classes in Tamil medium schools?
- RQ3. What is the efficacy of Interactive Hour module in terms of classroom interaction (CI) and learning outcomes?
- RQ4. What is the effectiveness of inclusion of Interactive Hour in English language curriculum on English language production of students in Tamil medium schools?

6. Hypotheses

The following hypothesis statements are part of Phase II of the study for testing the effectiveness of the Interactive hour module and its effectiveness on English language production.

Hypothesis 1: H_{01} = There is no significant difference in the extent of classroom interaction (CI) at the whole-class level between English language classes and Interactive Hours.

H_{a1} = There is a significant difference in the extent of classroom interaction (CI) at the whole-class level between English language classes and Interactive Hours.

Hypothesis 2: H_{02} = There is no significant difference in the extent of classroom interaction (CI) in individual student modality between English language classes and Interactive Hours.

H_{a2} = There is a significant difference in the extent of classroom interaction (CI) in individual student modality between English language classes and Interactive Hours.

Hypothesis 3: H_{03} = There is no significant difference in the individual units' progress test scores of the participants in transaction of Interactive Hour module (CI).

H_{a3} = There is a significant difference in the individual units' progress test scores of the participants in transaction of Interactive Hour module (CI).

Hypothesis 4: H_{04} = There is no significant difference in the measures of Complexity (C) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

H_{a4} = There is a significant difference in the measures of Complexity (C) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

Hypothesis 5: H_{05} = There is no significant difference in the measures of Accuracy (A) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

H_{a5} = There is a significant difference in the measures of Accuracy (A) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

Hypothesis 6: H_{06} = There is no significant difference in the measures of Lexis (L) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

H_{a6} = There is a significant difference in the measures of Lexis (L) in English language production between the pretest and posttest scores after the intervention (Interactive Hour module-CI).

Hypothesis 7: H_{07}= There is no significant difference in the measures of Fluency (F) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

H_{a7} = There is a significant difference in the measures of Fluency (F) in English language production between the pretest and posttest scores post the intervention (Interactive Hour module-CI).

7. Operational Definitions

7.1 Classroom Interaction (CI)

Language learning classrooms provides scope for research in second language learning in ways such as teaching methods, comparative studies, language acquisition through formal instruction and studies on classroom interaction (CI) (Ellis, 1994, p. 565). The researcher in this paper aims to bring about language learning by facilitating optimum CI in the selected context.

Interaction is "the fundamental fact of classroom pedagogy …everything that happens in the classroom happens through a process of live person-to person interaction" (Allwright, 1984, p.156). This interaction that happens inside the classroom between teachers and students is one of the inevitable components in the process of second language acquisition (Hall, 2003, p. 171). "In language classrooms, interaction takes on an especially significant role in that it is both the medium through which learning is realized and an object of pedagogical attention" (Hall, 2003, p. 171). Through classroom interaction (CI) the learners are given the opportunity to obtain comprehensible input and to produce pushed output.

The researcher in the present study considers the English language classes in Tamil medium schools in Coimbatore. Students' exposure to English language is restricted to only English language textbook materials and the interaction that happens in English language classroom. Meaningful interaction in English between the teacher and students in a classroom comprises of input, output and feedback is defined as the classroom interaction (CI). Classroom interaction (CI) in the present study include teacher talk (TT), student-talk, teacher-student interaction, students' talk in single/ multiple pairs, peer talk, choral talk, reading text materials, listening to audio materials.

It is to be noted that classroom interaction (CI) in the present study is facilitated through the researcher-developed Interactive Hour module. Hence 'Interactive Hour' module will be mentioned in place of classroom interaction (CI) throughout the thesis.

7.2 English Language Production

English language production is the production of spoken or written language. The research study uses the speech output as the dependent variable. The language output from the students would be used to measure the progress in language learning. Complexity, Accuracy and Fluency (CAF) are language performance descriptors and are used widely in second language research in recent

times as an alternative to standardized proficiency tests. CAF are “dimensions for describing language performance, most frequently used as dependent variables to assess variation with respect to independent variables such as acquisitional level or task features” (Pallotti, 2009, p. 590) In this research study the grammatical complexity is referred to as Complexity (C) and the lexical complexity (L) is referred to as lexis and hence the four variables of English language production such as Complexity, Accuracy, Lexis and Fluency will be referred to as CALF throughout the study.

7.3 Complexity and Lexis

Complexity is essentially “the extent to which the language produced in performing a task is elaborate and varied” (Ellis, 2003, as cited in Housen and Kuiken, 2009, p.461). L2 complexity can be subdivided into cognitive complexity and linguistic complexity. “Both types of complexity in essence refer to properties of language features (items, patterns, structures, rules) or (sub) systems (phonological, morphological, syntactic, lexical) thereof” (Housen and Kuiken, 2009, p.463).

- T-unit: “A T-unit is an independent clause and any associated dependent clauses, that is, clauses that are attached to or embedded within it” (Larsen- Freeman, 2006, p. 597).
- Grammatical Complexity: “Average number of clauses per T-unit” (Larsen- Freeman, 2006, p. 597).
- Lexical Complexity: “A sophisticated type-token ratio” (number of types divided by number of tokens multiplied by 100) (Larsen- Freeman, 2006, p. 597).

7.4 Accuracy

Accuracy is “the ability to produce error-free speech” (Ellis, 2003, as cited in Housen and Kuiken, 2009, p.461). “It is the degree of conformity to certain norms” of a particular language (Pallotti, 2009, p. 592).

- Accuracy: “Errors per 100 words.” (Bui & Skehan, 2016)

7.5 Fluency

Fluency is “the extent to which the language produced in performing a task manifest pausing, hesitation, or reformulation” (Ellis, 2003, as cited in Housen and Kuiken, 2009, p.461). It is also defined as the “capacity to produce speech at normal rate and without interruption or as the production of language in real time without pausing or hesitation” (Pallotti, 2009, p. 591).

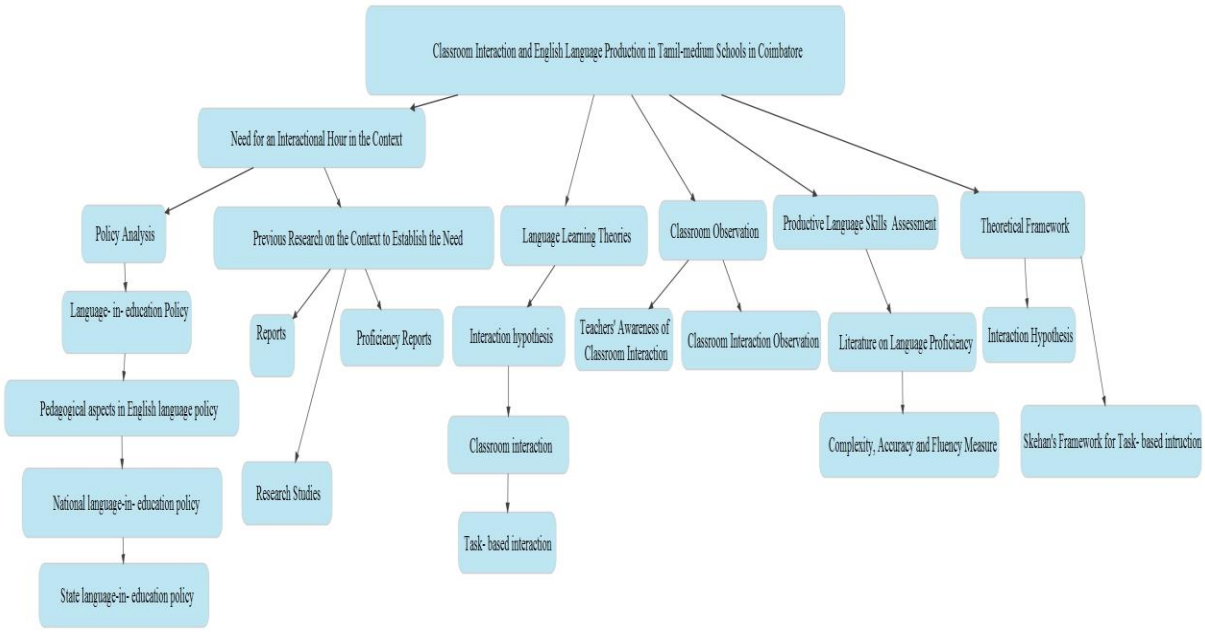
- Fluency: “Speech rate.” (Bui & Skehan, 2016); Number of fluent syllables divided by total time (De Jong, 2018)

The speech output of the participants is measured using CALF: An Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency developed by Dr. Gavin Bui and Prof. Peter Skehan in the year 2016.

8. Review of Related Literature

Figure 2

Literature Review Map


Classroom Interaction and English Language Production in Tamil-medium Schools in Coimbatore
Need for an Interactional Hour in the Context
Policy Analysis
Previous Research on the Context to Establish the Need
Language Learning Theories
Classroom Observation
Productive Language Skills Assessment
Theoretical Framework
Language- in- education Policy
Reports
Proficiency Reports
Interaction hypothesis
Teachers' Awareness of Classroom Interaction
Classroom Interaction Observation
Literature on Language Proficiency
Interaction Hypothesis
Pedagogical aspects in English language policy
Classroom interaction
Complexity, Accuracy and Fluency Measure
Skehan's Framework for Task- based intruction
National language-in- education policy
Research Studies
Task- based interaction
State language-in- education policy

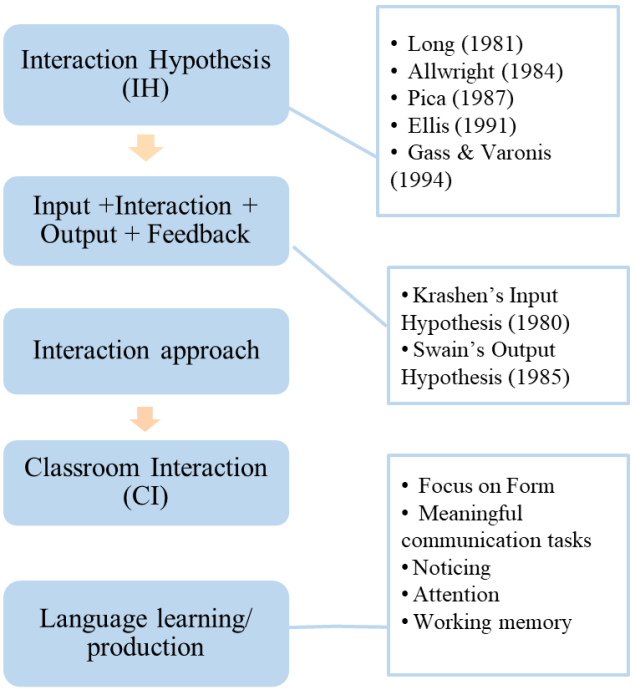
The review of literature consists of five main divisions. In the first section, the researcher reviews all the policy documents, published reports and research studies along with the

theoretical background of Language Policy and Planning (LPP). Through this division, the researcher shows the need for an interaction hour in the context by highlighting the goals stated in the policy documents. A review of previous research studies shows the inefficiency in the English language education system in the selected context.

In the second section of the review, the researcher introduces the different approaches and methods in English language teaching. The review provides the background to the second language learning theories and traces the emergence of the interaction hypothesis. The review looks at the concept of 'task- based interaction' and reviews the published conceptual and empirical research studies to strengthen the claim of the interaction hypothesis. This section concludes by highlighting those features that were taken as inputs for the 'Interactive Hour' module development.

Figure 3

Emergence of Interaction Approach



The next two sections focus on the review of the research tools and assessment models. It explores the tools in detail and reviews research studies which have adopted the research tools and assessment model. The last section of the review of literature exclusively focuses on the

theoretical framework that the researcher adopted for the study which is the interaction approach of language learning. The rationale behind the choice of the theoretical framework is clearly established.

8.1 Education Policy of India and the State of Tamil Nadu

The review of the National Education Policy (2016) was important to understand and critically analyse the Policy Note of the Government of Tamil Nadu (2018) at a later stage. There are three significant aspects to be drawn from the national education policy with respect to the English language teaching and learning in the state of Tamil Nadu.

The Three Language Formula (TLF) was formulated in 1968 National Education Policy resolution. The TLF recommends that each child should be taught three languages in the school education. However, Schiffman (1996) points out to the flaw in the execution of the formula and said that "this proposal has been honored in the breach more than in reality" (p. 167). The non-Hindi speaking areas showed some opposition, mainly Tamil Nadu. The state never followed the TLF policy and followed the old dual language system.

The policy also provides input regarding the choice of the medium of instruction and the class at which the teaching and learning of English language could be introduced. The policy recommends that the initial instruction should be in the mother tongue or the first language medium and that English language could be introduced anytime right from grade one. The policy also cites that the perception of considering fluency in English language as one of the mandatory goals of school education is the compelling reason behind the introduction of English medium classes in government schools across India.

The policy note (2018) published by the department of school education of Tamil Nadu aims at improving the overall quality of education by the introduction of various welfare schemes and the administrative efficiency of the school education system in the state. A general evaluation of the policy note shows that there are very minimal references made to improving English language teaching and learning scenario in Tamil Nadu. The report informs the researcher that the English medium sections were introduced in the government schools in the academic year 2012- 13 as a response to the aspiration of the parents to get their children educated in English medium schools. The department of school education takes a few initiatives currently to improve

the language education scenario in Tamil Nadu. Their primary target is observed to be to improve and assist the English language proficiency of the teachers of English. The District Institute of Education and Training (DIET) that functions under the State Council of Educational Research and Training (SCERT), conducts in- service training programs with specific focus to the English language skills. The in- service training is provided at the primary and the upper primary level. At the primary level the training focuses on the LSRW (Listening, Speaking, Reading, and Writing) skills in English. Whereas, at the upper primary level two out of the five training programmes are on English language teaching. Teaching prose, poetry and grammar are taught for a period of two days followed by training in functional grammar and classroom communication for another two days. The policy note has also proposed the development of an online platform called 'My English- an online capacity building course for teachers' in collaboration with the British Council. The platform aims at providing an online course for six weeks to improve the language proficiency of the teachers and also to train them to integrate technology in language classrooms.

8.2 English Language Teaching Position Paper

A well- drafted and theoretically sound position paper on English language teaching was published by the National Council of Educational Research and Training in 2006. The paper sets clear goals for English language learning students such as to gain proficiency in the language and the capacity to perceive abstract thoughts and receive knowledge in the target language. The problems mentioned in the paper are still very much the same and it's an unfortunate thing that a position paper published over a decade ago still holds good for understanding the teaching and learning of English in India.

The position paper is observed to be the very first government document to have acknowledged the various layers of teaching situations in India, which was till then considered as one entity and treated in a uniform way. The two governing factors of the divisions among the schools in India are teachers' proficiency in English and pupils' exposure to the English inside and outside school. Hence, "Input rich communicational environments are a prerequisite for language learning." The paper refers to those set of learners who have a poor exposure to the language as "disadvantaged learners" (NCERT, 2006, p. v). I would be borrowing this reference term for my

study as my research primarily focuses on optimizing the English language teaching and learning scenario among the Tamil medium government school students.

Secondly, the position paper focuses on the training that is being imparted to the teachers. It emphasizes on the need for an efficient pre- and in- service training programmes to improve the language proficiency and equip them with the right teaching methods and tools for promoting classroom interactions. Finally, the most important aspect which to a very large extent decides as to what really happens in an English language classroom is dealt with. The scores of the examinations that are conducted at the end of every term and the midterm tests decide the students' promotion to next grade of class. Reports show that the students are detained from classes especially in class X because of their inability to score the minimum pass marks primarily in English and then in Mathematics. The inevitability of these examinations creates anxiety in the process of learning and repeated failures over the years eventually results in aversion towards learning the language among the students. To respond to the students' immediate needs the teachers plan their classes in the examination point of view and this affects the prime goal of English classroom which is of language fluency and communication development. This paper makes a significant proposal for a shift from achievement-oriented language evaluation to the measurement of language proficiency. "National benchmarks for language proficiency need to be evolved preliminary to designing a set of optional English language tests that will balance curricular freedom with the standardization of evaluation that certification requires, and serve to counter the current problem of English (along with mathematics) being a principal reason for failure at class X" (NCERT, 2006, p. vi).

The policy reports and the research articles exhibit the complexity of issues embedded in the English language teaching and learning scenario in India. The readings show that the existing problems are not newly bloomed ones. They have been very much present over the past few decades and have been discussed over and over again for years. A considerable amount of minor and major research projects has been attempted to address these problems. The persistence of English language teaching and learning problems even to the present day shows that none of the initiatives has clearly had effective influences over the past two decades. From the review it could be concluded that there are three major factors that need to be attended to and that those three factors are possibly the key aspects of bringing out a drastic improvement in the scenario.

The three issues that demand research intervention are the absence of an enabling environment for language learning, an inefficient teacher education system (both at the training and recruitment level) and finally the achievement-oriented language examinations rather than proficiency-driven tests.

9. Theoretical Framework

9.1 Interaction Hypothesis

Interaction hypothesis provides a theoretical account of the relationship between interaction and L2 acquisition. The interaction hypothesis could be traced right back to Long's work in the year 1980, where he researched on the input and interactional features in conversations between native and non-native speakers. Long (1983) emphasized on the inevitability of access to comprehensible input for successful L1 or L2 acquisition. One of the suggested ways to make input comprehensible is by bringing in modifications to the interactional structure of conversation. The tasks that demand information exchange is a conditional factor to create opportunities to make modifications in the conversation structure. One other person who is associated with the evolution of the Interaction hypothesis is Teri Pica. She introduced the factor of social relationship between the participants as a determiner of interactional modifications. Ellis (1991) summarized the interaction hypothesis as a hierarchical three-part statement (see Table 1). The researcher takes this stance for the understanding of the 'interaction hypothesis' in the present study. The first statement talks about the need for comprehensible input, the second about the need for modifications in the structure of conversation to enhance comprehension and the third on the conditional opportunities for restructuring.

Table 1

The Interactional Hypothesis

1. Comprehensible input is necessary for L2 acquisition (= the input hypothesis)

2. Modifications to the interactional structure of conversations which take place in the process of negotiating a communication problem help to make input comprehensible to an L2 learner.

3. a. Tasks in which there is a need for the participants to exchange information with each other promote more interactional restructuring.

   b. A situation in which the conversational partners share a symmetrical role relationship affords more opportunities affords more opportunities for interactional restructuring.

Note. From "The interaction hypothesis: A critical evaluation," pp. 9, by Rod Ellis, *Language acquisition and second/ foreign language classroom*, 1991, Regional English Language Centre.

'Interaction hypothesis' is now widely referred to as 'interaction approach' in the literature of Second Language Acquisition (SLA) as significant number of empirical studies led to "greater specificity and theoretical advancement" (Gass & Mackey, p. 180) in the topic.

9.2 Interaction Approach

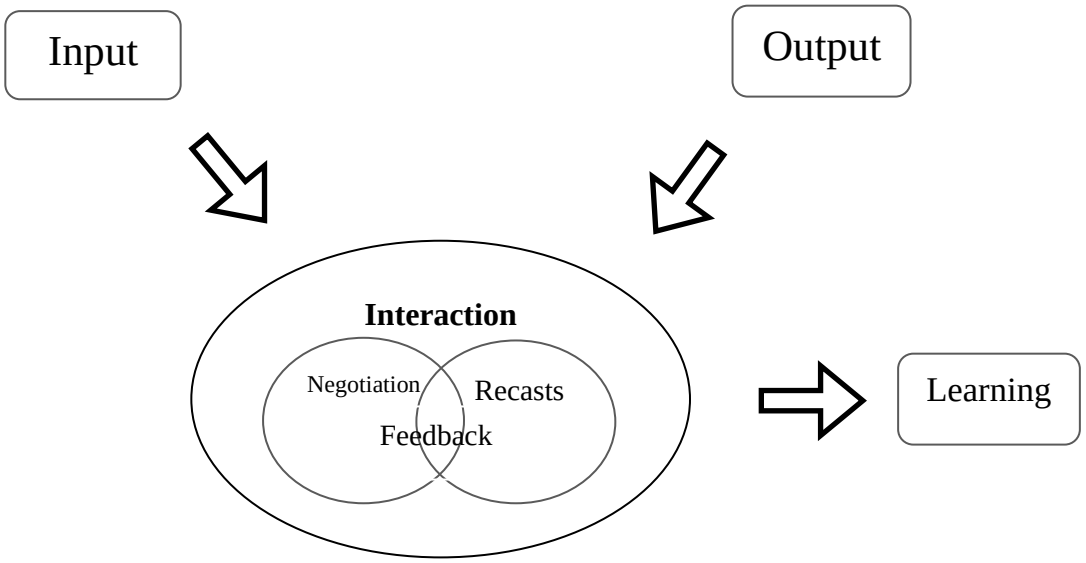
Interaction approach is built on the basic premise that language learning is facilitated by learner's exposure to language (input), production of language (output), participation in conversations (interaction) and feedback received on the production of language (feedback). Emphasis is laid on the environment in which the learner is engaged in. Interaction approach strongly subscribes to the idea that there is a correlation between interaction and learning. "Negotiation for meaning, and especially negotiation work that trigger interactional adjustments by the NS or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (Long, 1996, pp. 451-452).

Also, Gass (2003) acknowledges the fact that research on interaction "takes as its starting point the assumption that language learning is stimulated by communicative pressure and examines the

relationship between communication and acquisition and the mechanisms (e.g., noticing, attention) that mediate between them" (p. 224). In explaining how interaction brings about learning Gass and Mackey (2007) say that through interaction, a learner's attentional resources (selective attention) are directed to problematic aspects of knowledge or production. First, the learner may notice that what she says differs from what a native speaker says. This is often referred to as *noticing the gap* (Schmidt & Frota, 1986, as cited in Gass and Mackey, 2007). In addition, learners may notice that since they can't express what they want to express, they have a hole in their interlanguage (Swain, 1998 as cited in Gass and Mackey, 2007). The interaction itself may also direct learner's attention to something new, such as a new lexical item or grammatical construction, thus promoting the development of the L2. (p. 186)

Figure 4

Diagrammatic Representation of Interaction Approach



9.3 A Framework for Implementation of Task- based Instruction (Skehan, 1996)

The researcher has adopted the Task- based Language Teaching (TBLT) approach to facilitate interaction in the English language classroom through the Interactive Hour module. Skehan (1996) proposed a framework for the implementation of task- based instruction which was designed in such a way that it is highly favourable towards achieving complexity, accuracy and fluency (CAF). He stated that CAF are the most relevant goals for task- based instruction. Skehan's (1996) framework consisted of three stages of task-based instruction such as the task

sequencing features, methodological stages in implementing tasks and factors influencing task implementation.

Table 2

Task Sequencing Features

Task Sequencing Features
Code complexity
Cognitive complexity
Cognitive processing
Cognitive familiarity
Communicative stress
Time pressure
Modality
Scale
Stakes
Control

Note. From "A framework for the implementation of task-based instruction," (p. 52), by P. Skehan J, 1996, *Applied Linguistics.*

Table 3

Methodological stages in implementing tasks

Stage	Goal	Typical Techniques
Pre- emptive work	Restructuring - establish target language - reduce cognitive load	Consciousness raising Planning
During	Mediate accuracy and fluency	Task choice Pressure manipulation
Post 1	Discourage excessive fluency Encourage accuracy and restructuring	Public performance Analysis Testing
Post 2	Cycle of synthesis and analysis	Task sequences Task families

Note. From "A framework for the implementation of task-based instruction," (p. 54), by P. Skehan J, 1996, *Applied Linguistics.*

Table 4

Factors influencing task implementation

Stage Goal	Code complexity	Stress	Cognitive complexity
Pre- emptive **Restructuring** **- establish target language** **- reduce cognitive load**	Pre- teach Consciousness raising Practice - conventional - parallel tasks - rehearsal of elements		**Processing** Observe Solve similar tasks Plan - cognitively - linguistically Familiarity Activate
During **Mediate accuracy and fluency**	Accuracy focus Conformity pressure	TASK CHOICE Time Modality Scale Stakes Control	Support available Surprise elements - additional - conflicting
Post 1 **Discourage excessive fluency** **Encourage accuracy and restructuring**	Pubic performance - teacher - group - camera Degree of analysis Testing		
Post 2 **Cycle of synthesis and analysis**	The task sequences - repeating - parallel tasks Task families		

Note. From "A framework for the implementation of task-based instruction," (p. 57), by P. Skehan J, 1996, *Applied Linguistics.*

10. Research Design

The researcher adopted the embedded mixed methods research design for the study. "The embedded design includes the collection of both quantitative and qualitative data, but one of the

data types plays a supplementary role within the overall design" (Creswell & Plano Clark, 2007, p. 68). The qualitative and quantitative data are used to answer different research questions in the study and one of the key aspects of a mixed methods study to be qualified under embedded design model is that one data set provides a supportive, secondary role in a study based primarily on the other data type. The explanatory or the exploratory designs under mixed methods are not suitable for the present study as the purpose of the qualitative phase of the study was neither to explain the quantitative results nor to develop measures or instruments or identify variables.

Figure 5

Embedded Design

Note. From *Designing and Conducting Mixed Methods Research*, (p. 68), by J. W. Creswell & V. L. Plano Clark, 2007, Sage Publications.

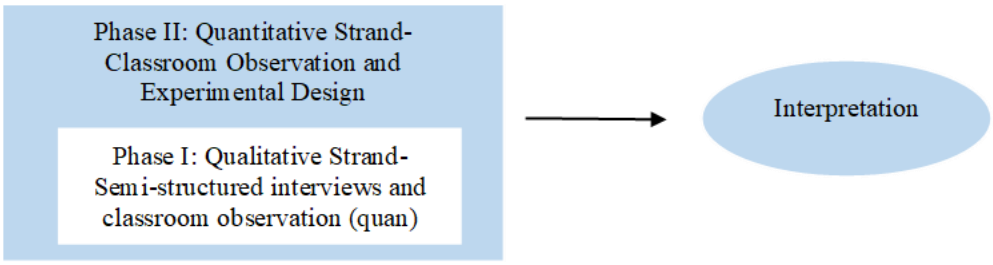
This study involved both qualitative and quantitative data collection, analysis and interpretation and were used to answer the four different research questions in the study. The qualitative data collected in the study was used for supplementing and establishing the need for development of the Interactive Hour modules where the English language teachers were interviewed and the English language classes were observed. In the quantitative phase, the effectiveness of the Interactive Hour modules which was developed by the researcher was evaluated using an experimental model. The qualitative data and a minor quantitative component in phase I of the study was used to answer the research questions 1 and 2 (RQ1 & RQ2). The quantitative data from classroom observations and experimental study were used to answer research questions 3 and 4 (RQ3 & RQ4).

The study was carried out in two phases. In phase I of the study there was qualitative analysis of the teachers' goals and classroom teachers' interactional awareness. There was also a quantitative aspect of observation of the extent of classroom interaction (CI). This was followed

by phase II of the study which is completely quantitative. It comprised of a quantitative observation of classroom interaction (CI) and an experimental study where the efficacy of the Interactive Hour module and the effectiveness of Interactive Hours on English language production were evaluated. English language production was measured through CALF measures.

Figure 6

Embedded Research Design

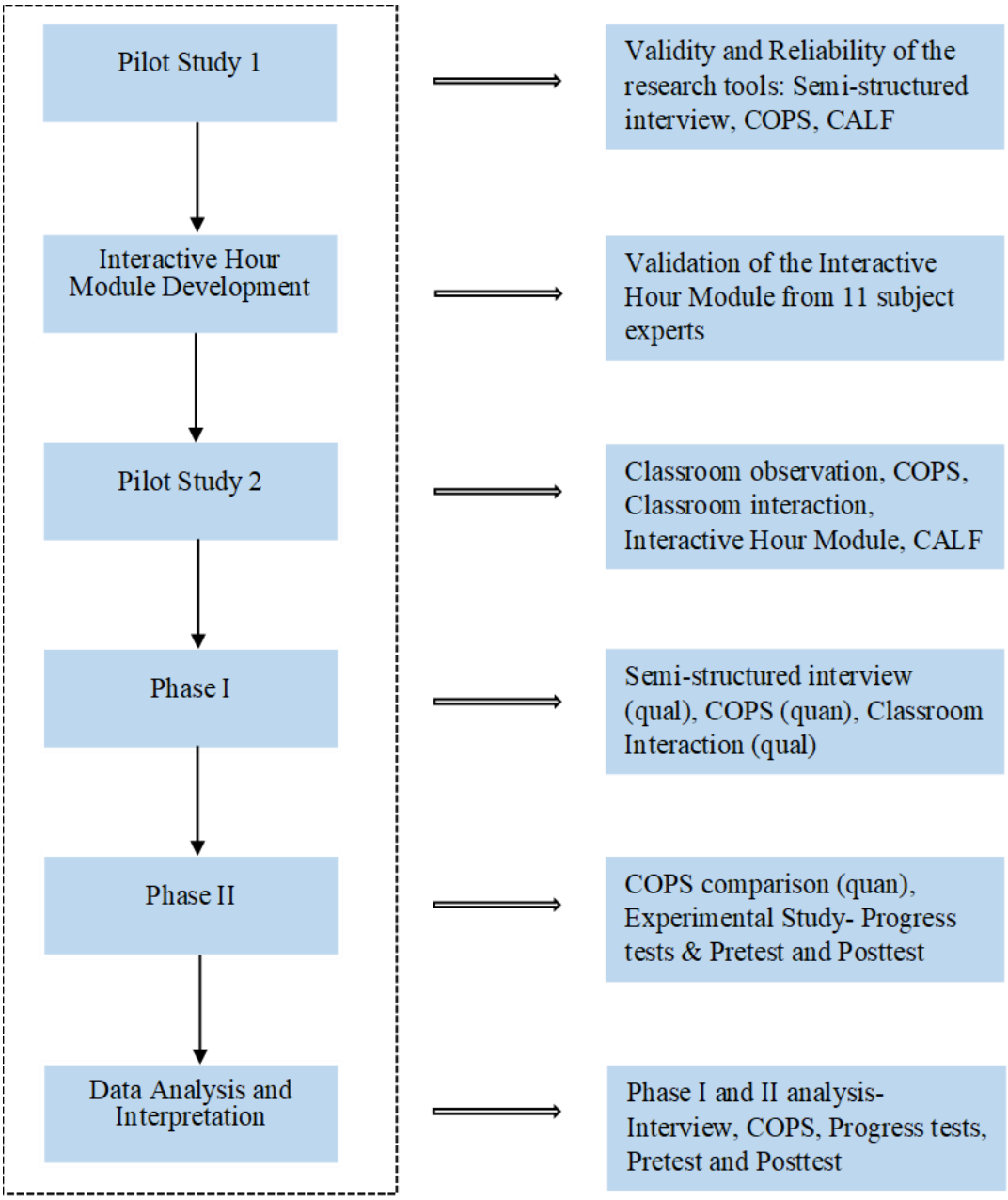

Phase II: Quantitative Strand- Classroom Observation and Experimental Design
Phase I: Qualitative Strand- Semi-structured interviews and classroom observation (quan)
Interpretation

11. Procedure of the Study

An overview of the overall procedure of embedded mixed-method design of the present study is charted out in Figure 7.

Figure 7

Flowchart of the Procedure of the Research Study


Pilot Study 1
Validity and Reliability of the research tools: Semi-structured interview, COPS, CALF
Interactive Hour Module Development
Validation of the Interactive Hour Module from 11 subject experts
Pilot Study 2
Classroom observation, COPS, Classroom interaction, Interactive Hour Module, CALF
Phase I
Semi-structured interview (qual), COPS (quan), Classroom Interaction (qual)
Phase II
COPS comparison (quan), Experimental Study- Progress tests & Pretest and Posttest
Data Analysis and Interpretation
Phase I and II analysis- Interview, COPS, Progress tests, Pretest and Posttest

The study was conducted in two phases. The objectives of the first phase of the study were to understand the pedagogical goals of the teachers from the government-aided Tamil medium schools in Coimbatore and to evaluate the extent of interaction in the English language in classroom. These objectives were achieved through a semi-structured interview, classroom

observations and the COPS tool. The data from teachers' interviews were transcribed, categorized into themes and coded to understand the pedagogical goals. Teacher Talk (TT) from the observed classrooms were analyzed and categorized into modes and respective pedagogical goals as suggested in Framework for Analysing Classroom Interaction (Steve Walsh, 2006). The extent of classroom interaction in the English language classroom at a whole-class level and students' level was evaluated using Classroom Oral Participation Scheme (COPS) (King, 2012). Each of the classes was observed multiple times to increase the reliability of the findings. The results of the coding were tabulated and the total minutes and mean per class under every category were calculated.

Phase II of the study aimed at increasing the classroom interaction through a researcher-created module and testing its efficacy and effectiveness on English language production. The researcher developed an Interactive Hour module based on the interaction approach of language learning. This module which aimed at facilitating optimum of levels of interaction in English language classrooms in the selected context was piloted in Schools A and B to test its effectiveness on English language production. A main experimental study was then conducted for a period of four months in Schools P, Q and R. Since the sample included participants from three different institutions and were considered as one group for the experimental study, the samples were evaluated for equality of means based on the CALF measures before the commencement of the experimental study. The sample size of the experimental main study which met the inclusion criterion is 73.

The efficacy of the individual units in the Interactive Hour module in achieving the learning outcomes was tested using progress tests based on a grading rubric. The English language production of the participants was measured in terms of the CALF (Complexity, Accuracy, Lexis and Fluency) before and after the intervention. The students' speech output from picture description tasks were recorded for a maximum of two minutes and the speech was transcribed in CHAT format (MacWhinney, 2000). The transcribed speech data was coded in the CLAN software and then uploaded on CALF tool (Bui & Skehan, 2016) to derive the CALF measures of English language production. COPS tool was employed again to evaluate and compare the extent of oral participation that happened in the Interactive Hours to that of the oral participation that happened in English language classes.

12. Participants in the Study

The research study is contextualized in the district of Coimbatore in Tamil Nadu in the Tamil medium government schools. The participants in phase I of the study are teachers of English language in the selected context and English language classes are the samples for classroom observation. In phase II of the study, sixth grade students from the selected Tamil-medium government-aided schools participated in the experimental study. The dependent variable in this research study is the English language production of these participants. Kiddler (1974, as cited in Golub, 1975) in his analysis of syntactic density noted that the syntactic development is of an increasing pattern. Key findings of the study were that there was a significant increase in syntactic development at about the age of nine, followed by a drop at the age of 10 and a second significant rise at about the age of 11. The measurement of the dependent variable being CALF, which is essentially based on the T- unit, students below 11 years of age were not considered for the study. Students from lower classes would not be able to produce the language of varied structures for a long enough period to yield reliable measures. NCERT's (2017) 'Learning Outcomes at the Elementary Stage' report, devised a whole new set of learning outcomes for different curricular areas of the elementary stage to ensure equity in the quality of education across all schools including government, aided and private schools. Under the curricular expectations of the English language, the expectation of the acquiring ability to "speak about self, simple experiences; report events to peers, accurately and appropriately make connections and draw inferences" (p. 33) are all attributed only to the upper primary stage. More specifically, these attributes are more elaborated for Class VI. The suggested pedagogical processes for Class VI are that the learners should be provided with opportunities to listen to and follow English audio and video files along with providing input- rich environment, interaction, classroom activities and discussion (p. 34). The research study facilitates exactly these opportunities to improve the English language production of the participants. This is another major reason for the selection of Class VI for the present study.

13. Sampling Method and Sample Size

The researcher used a purposive sampling technique to select the sample of English language teachers for the semi-structured interviews. The sampling method used to select the classrooms for classroom observation was purposive sampling. The focus of the present study is VI standard

and hence only VI standard English language classes in Tamil medium sections from the schools that participated in the study were selected for classroom observation. The sampling technique used for the experimental study is consecutive sampling which is a sub type of convenience sampling as it differs in the aspect of inclusion criteria. Consecutive sampling, also known as enumerative sampling in experimental studies, "is the process of conducting research including all the people who meet the inclusion criteria and are conveniently available, as part of the sample" (Voxco, n.d.). The sampling technique used in the experimental study is not purposive as the selection of the final sample is based on chance and not on the researcher's prior knowledge or experience. One pe-requisite of consecutive sampling is to clearly define the participants' population in the experimental study (see section Participants of the study in chapter 1) from which the sample is selected based on the inclusion criteria. The inclusion criterion which was set for the selection of the sample for analysis from the participants of the experimental study is consistent attendance throughout the 54 hours of intervention using the Interactive hour module. The sixth standard students from schools A and B were part of the pilot study and schools P, Q and R were part of the main study. All the schools that participated in the study are located in Tamil Nadu in the district of Coimbatore.

The sample size of the teachers for the qualitative study is 10 and the number of classes observed for phase I is 20. The sample size of the participants in the main experimental study is 73 and the number of classes observed in phase II of the study is 20. The main study was carried out over a period of four months in the selected context.

14. Research Method and Tools

The researcher constructed a semi- structured interview for the qualitative analysis to understand the pedagogical goals of English language teachers. The interactional awareness of these teachers was observed and qualitatively analyzed using the modes and pedagogic goals proposed by Steve Walsh in the year 2006 in the Framework for Analysing Classroom Interaction. The classroom interaction was quantitatively observed using the Classroom Oral Participation Scheme (COPS) which was developed by Jim Kings in the year 2012. The data obtained from COPS in phase I is used to quantitatively establish the extent of interaction that happens in English language classes. The COPS data from phase II is used to show the difference in the interaction levels in the classroom between the English language classes and Interactive Hour

classes. Apart from the general English language production, the students were evaluated on the production of language on trained topics at the end of every unit which was measured using a rubric scale on factors such as content, complexity, accuracy, lexis, fluency and use of mother tongue. This rubric scale was developed by the researcher and the content was validated by two experts. It was designed to test whether every unit in the module resulted in the desired learning outcomes among the participants. The complexity, accuracy, lexis and fluency (CALF) of the speech production of the participants are measured using the CALF: An Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency developed by Dr Gavin Bui and Prof. Peter Skehan in the year 2016, before and after the intervention. The CALF measures of the students' production from the pre-test and post-test are compared for the evaluation of the effectiveness of researcher-developed Interactive Hour modules.

15. Reliability and Validity of the tools

The researcher drafted 22 topics and suggested questions for the semi-structured interview and had the content validated by three experts. Two government-aided Tamil medium school teachers were interviewed and the data were transcribed. The transcribed data was analyzed and categorized using the modes and pedagogical goals proposed by Walsh (2006) in Framework for Analysing Classroom Interaction. The data confirmed that the suggested questions and answers provided by the teachers were catering to the objective of understanding the pedagogical goals of the teachers.

The Classroom Oral Participation Scheme (COPS) (Kings, 2012), a structured observation scheme, is a minute-by-minute record of any kind of oral participation that happens inside the classroom along with a record of the oral participation of three individual students. The researcher piloted the tool in order to familiarize themself with the coding process and also to enhance the researcher's efficiency in coding.

The researcher piloted the CALF tool in the selected context to ensure its reliability. The number of participants in the study was 15. Each of the participants' speech was processed thrice for deriving the CALF measures from CALF: An Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency developed by (Bui & Skehan, 2016) to establish intra-rater reliability. The CALF outputs derived from three repeated measures were tabulated and analyzed

in SPSS using the Intraclass Correlation Coefficient (ICC). As the reliability of multiple scores from by a single rater was tested for absolute agreement, the two-way mixed-effects model was adopted as suggested by Shrout and Fleiss (1979).

Table 5

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	**.973[a]**	.937	.990	102.937	14	28	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.
a. The estimator is the same, whether the interaction effect is present or not.
b. Type A intraclass correlation coefficients using an absolute agreement definition.
c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

At 95% confidence interval, the ICC was estimated to be 0.973. The assessment of the agreement between the measures from the repeated measures by the researcher shows excellent levels of conformity as the value is greater than 0.90 (Shrout & Fleiss, 1979).

16. Development of the Interactive Hour module

The researcher developed the Interactive Hour module having the interaction approach of language learning as the theoretical framework and Skehan's (1996) framework for the implementation of task-based instruction as the methodological framework.

The Interactive Hour module was first presented to the supervisor for review and suggested changes/ additions were made in aspects of objectives of the module, the number of videos, an appendix of commonly used expressions, unit planner, balance in the time ratio of input and interaction in every hour and citations for the audio, visual and images used in the module. The module was then sent out to eleven experts for validation.

The Interactive Hour module was first prepared for face-to-face transactions and this version of the module was validated by seven experts. These experts included formerly professors from Central and Public universities in India, a professor from NCERT, an ELT trainer and examiner

of an international organization, representatives from ELT organizations, and an assistant professor from private university. The researcher tabulated the feedback received from the experts and incorporated the suggested changes in the Interactive Hour module. Due to COVID-19 lockdowns during the years 2020 and 2021, the schools shifted to online modes of education. The Interactive hour module was adapted for online transactions with task modifications in the module. The adapted module was again validated by a set of four validators who had training and expertise in the development of learning modules and ICT in language education.

During the pilot study, the researcher found that there was little response from the participants in the first few sessions when the English language was used for communication. The module, on the other hand, suggested that the teachers should be using only the English language in the transaction of the module. As suggested by one of the experts, the researcher realized that it was challenging to ensure comprehension and facilitate interaction in the class by communicating solely in English. The researcher hence made the alteration in the overview document suggesting that 'the teacher must use the English language as much as possible' from the earlier version of 'the teacher should use only English language for communication'.

The researcher faced difficulty in following the unit planner as suggested in the module. The researcher realized that the audio and video files had to be played more than once coupled with explanation for better comprehension which in turn resulted in better interaction in the classroom. Post the pilot study, the unit planner was modified to accommodate time for repeated exposure to the audio and visual learning materials.

The Interactive Hour module is proposed as a supplementary to the existing English language curriculum in Tamil Nadu for sixth-standard students in Tamil medium schools. The module has six units and the total time period required to transact the 54-hour module is around four months with three sessions per week. This module is designed for the English language teachers to facilitate the 'Interactive Hour' classes in the Government Tamil medium schools in Tamil Nadu.

The syllabus for the interactive hour module is functional in nature. Each unit focuses on either one function or a related set of functions. The six units in the module are: Self Introduction, Introducing Others; Conversation; Describing a Person/Thing/Picture; Conversation; Instructions, Commands and Requests and Narrating an Incident/ Story/ Daily Routine. Every

unit will have the following components in the order of relevance to the function in focus: Let's Interact, Listening Time, Screen Time, Task Time, Movie Time, Game Zone, Task Time, Small Talk and Score Sheet.

The tasks are arranged in the sequence as recommended by Skehan (1996) considering the factors such as code complexity, cognitive complexity and communicative stress. The tasks included in every unit are listed out in such a manner that the teacher would implicitly follow Skehan's (1996) methodological stages in implementing the tasks.

In this module, there is the repetition of a particular task at the beginning and end of every unit. The reasons for conducting the same task twice are to trace the pre-test and the post-test scores for every module and to track the effectiveness of each of the units in the module on English language production throughout the transaction process of this module. However, in the proposed module, these tasks will appear only once in every module. The effectiveness of each of the units in the module on English language production is tested throughout the transaction process of this module in the form of progress tests based on five factors such as Content, Complexity, Accuracy, Fluency, Usage of Mother Tongue using a grading rubric based on CAF dimensions which was further validated by two experts.

Table 6

English Language Assessment Rubric Scale (Pre-test and Post-test)

Levels	**Content**	**Complexity**	**Accuracy**	**Fluency**	**Mother Tongue**
5	Covers all the required main points/ clearly communicates the intended message	Simple, compound and complex sentences	Error free sentences	Smooth utterance with barely any pause	Nil
4	Covers many main points/ Partial communicationsof the message	Simple and compound sentences	Errors in 1-3 sentences	Smooth utterance with one or two pauses	1-2 words in Tamil
3	Covers a few main points/ Repeated attempts to communicate the message	Simple short sentences	Errors in 3-5 sentences	Slightly hesitant utterance with a few pauses	3-5 words in Tamil

	correctly				
2	Covers a few relevant and irrelevant points/ Miscommunication of the message	Simple short often repetitive sentences	Errors in many sentences	Hesitant utterance with short pauses.	1-2 phrases in Tamil
1	Covers only irrelevant points/ Attempts to communicate the message	Phrases	Errors in all the phrases	Hesitant and strained utterance with long pauses	3-5 phrases in Tamil
0	Utters only a few words related to the topic/ Fails to communicate the intended message	Words	Errors in usage of words	Hesitant and strained utterance with lapses and long pauses	Sentences in Tamil

17. Statistical Tools

The quantitative data obtained from phase II of the study were tabulated and the following statistical tools in SPSS 21.0 version were used to obtain the required results. The Shapiro-Wilk test of Normality was conducted for results obtained from all the tools in phase II of the study. The data obtained from the COPS tool, progress grading rubric and CALF tool were found to be all non-parametric in nature. In order to equate the samples from schools P, Q and R of unequal sample sizes, Welch's *t*-test was used to test the equality of means. The number of minutes of classroom interaction observed across 20 categories of the COPS tool in two sections from the independent samples of regular English language classes and Interactive Hours were compared statistically using the Mann-Whitney U test. Spearman's rank correlation coefficient was used to find the relationship between the oral participation among the categories in the first section of the COPS tool. Wilcoxon signed-rank test of related samples was used to evaluate the efficacy of the individual units in the module by comparing the differences in the progress tests of the participants of all six units. The effectiveness of the Interactive Hour module on English language production in the paired non-parametric sample was tested using Wilcoxon signed-rank test. It was used to compare the differences in the pre-test and post-test CALF measures of English language production of the single-experimental group. The researcher also calculated the effect size of all the measures by dividing the absolute standardized test statistic z obtained from the Wilcoxon signed rank tests by the square root of the number of pairs.

18. Findings of the Study

The data obtained from a semi-structured interview with English language teachers in phase I of the study was used to establish a realistic representation of the actual scenario of an English language classroom in Tamil medium schools in Coimbatore in terms of teachers' pedagogical goals, use of English language for classroom interaction and English language assessment. The data showed that the pedagogical goals of English language teachers were not aligned with that of the goals suggested in the national and state official policy documents related to English language teaching. The interview data suggested that the teachers were dissatisfied with the existing English language assessment model. It was found out that none of the teachers had attended the 'My English course', an online capacity-building course, which was developed by the government of Tamil Nadu in association with British Council exclusively for English language teachers. It is hence shown that what is mentioned in the policy documents is not really a true reflection of the actual practices of English language teaching and learning in the classrooms.

From the policy analysis it was observed that the lack of adequate English language learning opportunities in mother-tongue medium schools in terms of the extent of teachers' English language proficiency and classroom interaction in the English language are not considered in the language planning phase. Inputs from the policy implementation agents concerning the issues in actual language teaching, learning and assessment in classroom texts have been ignored. The results of the study suggest four major problems in the policy to bridge the existing communication gap between the policy decision makers and implementation agents: efficient language planning taking the actual classroom scenario into consideration; involvement of teachers as one of the key agents in the policy-making process; inclusion of pedagogical approaches in the policy and provision of supplementary capacity building teacher training and language learning resources for the mother-tongue medium schools.

An analysis of the 62-minute Teacher Talk (TT) in English from the observed total of 900 minutes in phase I of the study showed that the teachers did not use skills and systems and classroom context modes in English language classes and they were had low classroom interactional awareness. 23 minutes of TT was characterized by single extended teacher turns which consisted of explanations and instructions and the absence of participation of learners.

These characteristics were associated with the pedagogical goals of transmitting information, organizing the learning environment, referring learners to materials and changing from one to another. 39 minutes of the TT was observed to fall under the materials mode where the pedagogical goals were providing reading practice around a piece of material, eliciting responses in relation to the lessons and evaluating answers for display questions. The interactional features that were identified in the TT were IRF pattern interaction, display questions and corrective repair in reading skills.

The results of the COPS tool from overall classroom observations of 20 class sessions from phase I of the study showed that a mean of 6.89% of oral participation in the classroom was teacher initiated and 1.4% was student response. The choral participation and silence in class summed up to 1.2% and 7.2% respectively. The students' average oral participation was found to be 0.92% of student response and 0.48% of participation in reading activities. The students were found to be exposed to language output from the teacher and peers for a mean average of 3.78% and 2.67%. Students' response in class amounted only up to 0.92% time per class. In totality, oral participation in the English language in English language classes in Tamil medium schools was recorded only up to an incredibly low 9.5% of the class across three out of the observed classroom interaction of nine categories. On the other hand, an incredibly high 83.23% and 7.22% of the entire class time was characterized by oral participation in Tamil and silence respectively in English language classes. The nature of the interaction between teachers and students was observed to lack the interactive features that are identified to facilitate language acquisition. The transcripts suggested that it was majorly characterized by short phrases and single word responses.

The analysis of data obtained from the COPS tool and progress tests provided significant evidence for the efficacy of the researcher-developed Interactive Hour module based on the interaction approach of language learning in phase II of the study. A statistical comparison between 20 classes each of English language classes and Interactive Hours showed that there was a significant increase in the number of minutes of classroom interaction (CI) in the Interactive Hours both at the whole-class level and in individual student modality ($p<.001$). Calculation of the effect sizes showed that the influence of Interactive Hours on the number of minutes of classroom interaction (CI) was very large both at the whole-class level and in individual student

modality. Further, the results obtained from a correlation analysis showed that all the categories of oral participation at a whole-class level were positively correlated, suggesting that oral participation of any kind had a positive impact and various degrees of correlation with the other categories. The data revealed that the correlation between student-initiated interaction and teacher-response; and teacher-initiated interaction and the choral response was statistically significant at .01 and .05 levels respectively. This finding showed that teacher-responses to the students' queries or concerns in English are highly likely to encourage increased oral participation of the students in terms of student-initiated interaction in English. The results also indicated that with an increase in teacher-initiated interaction in English, there is an increase in individual and choral student response.

Statistically significant differences were observed in the progress tests conducted at the beginning and end of the transaction of the Interactive Hour module. The results implied that the transaction of individual units of the Interactive Hour module resulted in the achievement of the target learning outcomes in terms of participants' ability to perform the communicative functions aimed at in every unit. The computed effect sizes of the progress tests across all six units showed that the differences between the pre and post progress tests was overall very large in nature.

One of the major findings of the study was from the experimental study in phase II. The results showed that classroom interaction (CI) facilitated through the researcher-developed Interactive Hour module based on the interaction approach of language learning had a statistically significant influence on the overall English language production of the participants in terms of complexity, accuracy, lexis and fluency. The calculation of the effect sizes showed that the Interactive Hour module had a moderate effect on complexity, a large effect on accuracy and lexis and a very large effect on fluency.

19. Implications of the Study

The research yields policy recommendations for equitable English language education in Tamil Nadu. The research is of immense contribution to the curriculum and syllabus designers, textbook development committees, researchers, English language teachers and second language learners of English in India. The resulting Interactive Hour module is a common source of

framework for adaptation in various other states across the countries which are similar in context.

This research study gives valuable insights into the link between English language learning from classroom interaction with regards to complexity, accuracy, lexis and fluency. The findings of the study highlight the importance of English language teachers' proficiency and hence provides important input for English language teachers' education. This study implies the issues with the existing assessment models and paves way for developing alternate ways to test the speaking skills.

20. Limitations of the Study

One of the major limitations of the study is that the results of the study is geographically, linguistically and culturally restricted to the district of Coimbatore in Tamil Nadu. Due to the limitations in time and resources, the researcher restricted the study only to the students and teachers who volunteered for the study and the ones who consistently attended the Interactive Hour module sessions from three government-aided schools in Coimbatore.

The lockdown due to the COVID-19 pandemic during the years 2020-21 added on a few limitations to the study. The study was originally planned for face-to-face transactions in physical classes. However, the situation demanded a change in the mode of transaction of the Interactive Hour module. This, in turn, resulted in the change of the sample from government schools (type IV) to government-aided schools (type III) as the majority of students from the former had no accessibility to smart phones or mobile internet. During the coronavirus outbreak, students from government schools had common classes only on television mode. Poor accessibility to smart phones and internet in type III schools also had an impact on the number of participants (N=73) in the main study which is also one of the limitations of the study.

21. Tentative Structure of the Thesis

The thesis will have five chapters in total including the 'Introduction' and the 'Conclusion' chapters. The second chapter will be 'Review of Literature,' where the researcher attempts to situate the present study in the existing body of published research studies in English language education. The theoretical framework of the study will also be included in the second chapter.

The ‘Methodology’ chapter will present the research design, procedure and hypotheses of the study. The fourth chapter will be drafted to address the four research questions of the study. This chapter will include the data obtained through semi-structured interviews and classroom observations from phase I of the study. Data analysis of data obtained from classroom observation and experimental study in phase II will also be part of the fourth chapter. The summary of the study along with the results and main findings will be presented along with the limitations and suggestions for further research in the ‘Conclusion’ chapter.

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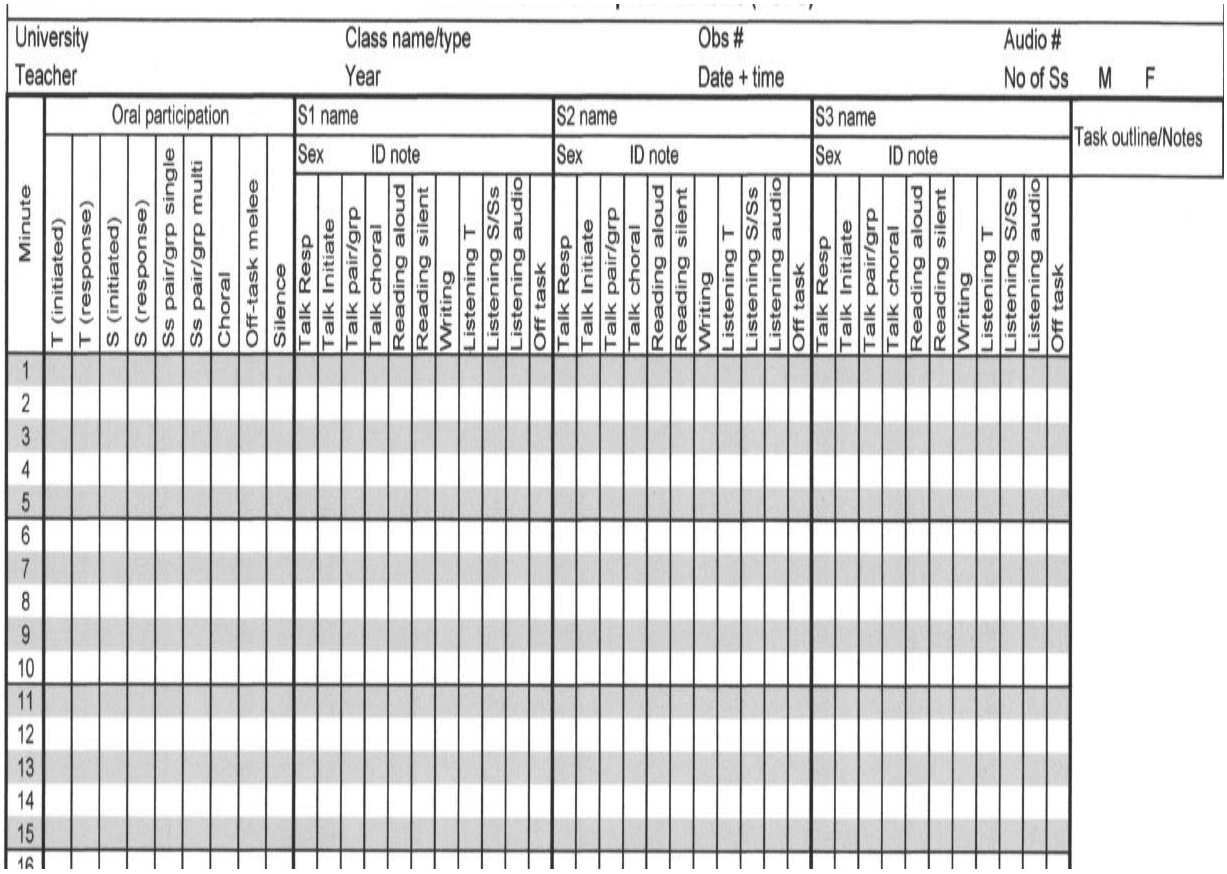
Appendix

A Framework for Analysing Classroom Interaction (Walsh, 2006)

Mode	Pedagogic Goals	Interactional Features
Managerial	- To transmit information. - To organize the physical learning environment. - To refer learners to materials. - To introduce or conclude an activity. - To change from one mode of learning to another.	- A single, extended teacher turn which uses explanations and/ or instructions. - The use of transitional markers. -The use of confirmation checks. - An absence of learner contributions.
Materials	- To provide language practice around a piece of material. -To elicit responses in relation to the material. -To check and display answers. -To clarify when necessary. -To evaluate contributions.	- Predominance of IRF pattern. - Extensive use of display questions. - Form- focused feedback. - Corrective repair. - The use of scaffolding
Skills and systems	- To enable learners to produce correct forms. - To enable learners to manipulate the target language. - To provide corrective feedback. - To provide learners with practice in sub- skills. - To display correct answers.	- The use of direct repair. - The use of scaffolding. - Extended teacher turns. - Display questions. - Teacher echo - Clarification requests. - Form- focused feedback.
Classroom context	- To enable learners to express themselves clearly. - To establish a context. - To promote oral fluency.	- Extended learner turns. - Short teacher turns. - Minimal repair. - Content feedback. - Referential questions. - Scaffolding. - Clarification requests.

COPS (King, 2012)



University	Class name/type	Obs #	Audio #
Teacher	Year	Date + time	No of Ss M F

Minute	Oral participation										S1 name												S2 name												S3 name												Task outline/Notes
											Sex	ID note											Sex	ID note											Sex	ID note											
	T (initiated)	T (response)	S (initiated)	S (response)	Ss pair/grp single	Ss pair/grp multi	Choral	Off-task melee	Silence		Talk Resp	Talk Initiate	Talk pair/grp	Talk choral	Reading aloud	Reading silent	Writing	Listening T	Listening S/Ss	Listening audio	Off task		Talk Resp	Talk Initiate	Talk pair/grp	Talk choral	Reading aloud	Reading silent	Writing	Listening T	Listening S/Ss	Listening audio	Off task		Talk Resp	Talk Initiate	Talk pair/grp	Talk choral	Reading aloud	Reading silent	Writing	Listening T	Listening S/Ss	Listening audio	Off task		
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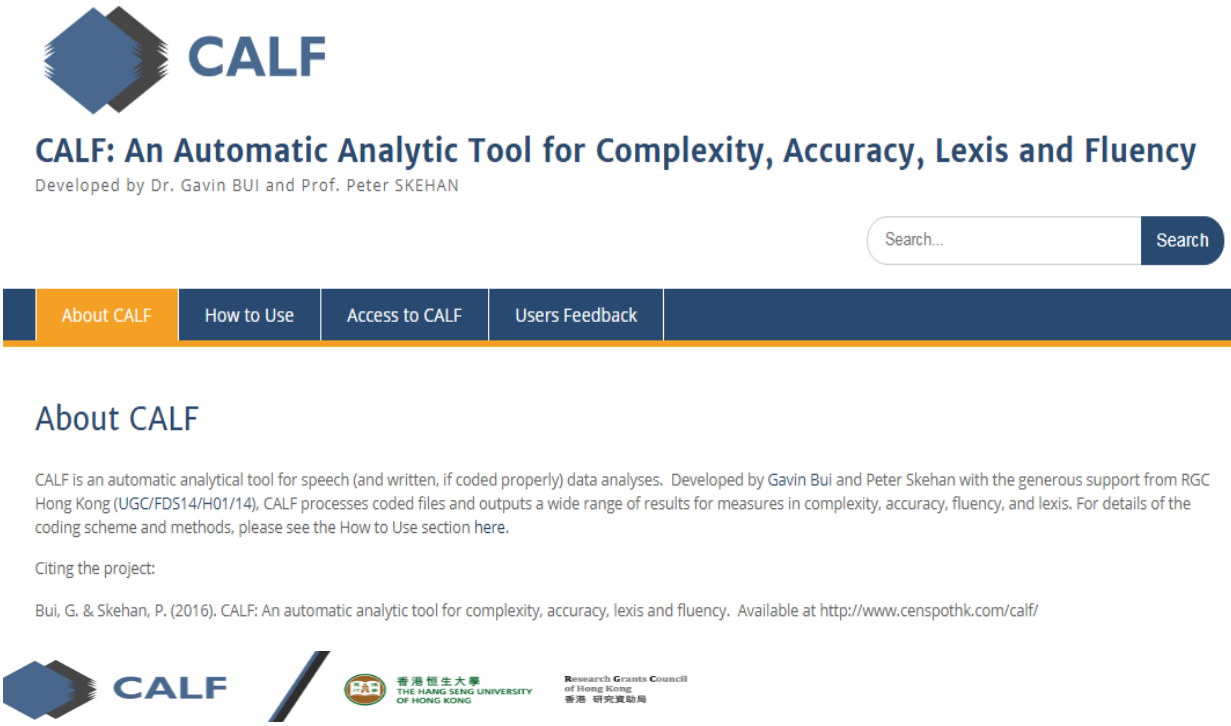
CALF (Bui & Skehan, 2016)


CALF
CALF: An Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency
Developed by Dr. Gavin BUI and Prof. Peter SKEHAN
Search...
Search
About CALF
How to Use
Access to CALF
Users Feedback
About CALF
CALF is an automatic analytical tool for speech (and written, if coded properly) data analyses. Developed by Gavin Bui and Peter Skehan with the generous support from RGC Hong Kong (UGC/FDS14/H01/14), CALF processes coded files and outputs a wide range of results for measures in complexity, accuracy, fluency, and lexis. For details of the coding scheme and methods, please see the How to Use section here.
Citing the project:
Bui, G. & Skehan, P. (2016). CALF: An automatic analytic tool for complexity, accuracy, lexis and fluency. Available at http://www.censpothk.com/calf/
CALF
香港恒生大學
THE HANG SENG UNIVERSITY OF HONG KONG
Research Grants Council of Hong Kong
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List of Publications

	Journal	Title	Status
December 2020 Volume No. 16 Issue No.4 (2020)	Journal of Language and Linguistic Studies **(SCOPUS indexed)**	Examining the effect of explicit instruction on receptive- productive gap	Published
July 2021 Volume No. 3 Issue No. 2 (2021)	Indian Journal of Educational Technology **(UGC Care listed)**	Assessment of English Language Oral Production using CALF: an Automatic Analytic Tool for Complexity, Accuracy, Lexis and Fluency	Published

List of Presentations

Date	Status	Forum	Title
28-30 December 2018	Presented	National Conference RIESI & ELTIF Bangalore University	Examining the role of explicit instruction in vocabulary learning: An experimental study
7-9 February 2019	Presented	2nd International ELTAI Conference, SRM, Chennai	The importance of vocabulary selection in drafting the English language syllabus for the primary and middle schools: A conceptual study
22-24 August 2019	Presented	National Seminar on Education, Systems, Practices and Research, CEDBEC, Christ (Deemed to be University)	Conditional factors for vocabulary acquisition through extensive reading in SLA: A Theoretical enquiry
9-12 October 2019	Presented	ELTAI's Golden Jubilee Conference, Amity University, Delhi	Reviewing equity in English language education in Tamil Nadu: A theoretical enquiry
16-18 January 2020	Presented	International Conference on Emerging Research Paradigms for Sustainable Development, School of Education, CHRIST (Deemed to be University)	The English Language Education Scenario in Tamil Nadu: Systematic Review
24-26 March 2021	Presented	1st International Conference on Emerging Trends in ICT in Education (virtual), CIET-NCERT, New Delhi	Assessment of English language oral production using CALF: an automatic analytic tool for Complexity, Accuracy, Lexis and Fluency
25- 26 Feb 2022	Presented	International Conference on Teaching, Learning and Assessment (ICLTA- 2022): Practices, Systems and Sustainability	Classroom interaction in English language classes in Tamil Nadu